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# PATENT ABSTRACTS OF JAPAN

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HO4N  5/76
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HO4N  5/91

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(72)Inventor :  WATANABE KATSUHIKO

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(54) VIDEO PRINTER AND ITS AUTOMATIC PRINT METHOD

(57)Abstract:

PURPOSE: To obtain properly only a required picture in the video printer without viewing from the first to the end of a television program.
CONSTITUTION: An index code detector 15 detects an index code superimposed on a television signal. When the index code is detected, a main CPU 16 controls that a picture on which the index code is superimposed is stored in a frame memory 5 and allows a mechanism section 7 to print out the picture. Thus, only a required picture is properly obtained without viewing from the start to the end of a television program.



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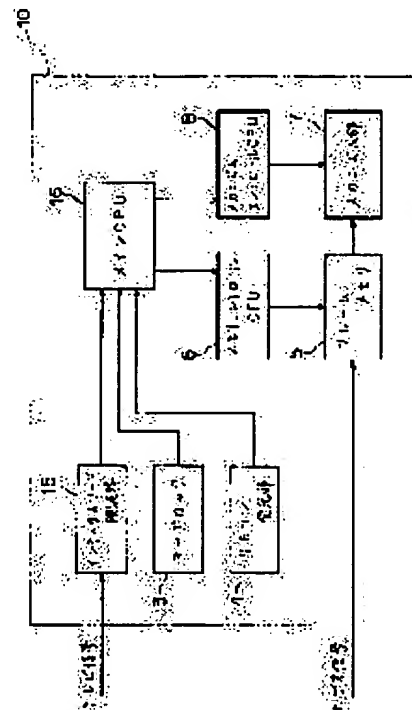
LEGAL STATUS

[Date of request for examination]                         30.11.2000

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[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

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of rejection]
[Date of extinction of right]

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CLAIMS

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[Claim(s)]
[Claim 1] In the video printer equipped with the frame memory which records an image, a printing means to print an image, and the control means which controls printing of an image to said printing means while controlling record to said frame memory of the inputted image It has an in deck code extract means to extract the index code on which the inputted TV signal was overlapped. Said control means The video printer characterized by performing control which performs control which records the image with which it was superimposed on this in deck code on said frame memory, and which is printed with said both printing means when an index code is extracted by said in deck code extract means.
[Claim 2] The 1st process in which it judges whether the index code on which the inputted TV signal was overlapped was detected, The 2nd process in which it judges whether the image with which it was superimposed on this index code when it was judged that said index code was detected in said 1st process was recorded on the frame memory, The 3rd process in which it judges whether printing activation is possible when the image with which it was superimposed on said index code in said 2nd process is judged to have been recorded on the frame memory, The 4th process which outputs the command for printing the image recorded on said frame memory when it was judged in said 3rd process that printing activation is possible, The 5th process which outputs the command for making the image with which it was superimposed on said index code when the image with which it was superimposed on said index code in said 2nd process was judged not to be recorded on a frame memory record on said frame memory, The automatic printing approach of the video printer characterized by printing the image with which it was alike with the image and was superimposed more on the index code.

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[Translation done.]

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to the video printer which prints the image copied out on television, and its automatic printing approach.
[0002]
[Description of the Prior Art] When printing an image with a video printer, he is trying to choose an image to print while a user surely looks at the image of a video cassette recorder (VCR) or television conventionally. In addition, a video cassette recorder is the same as that of a video tape recorder (VTR).
[0003] Drawing 4 is the block diagram showing the outline configuration of the conventional video printer 1. In this drawing, 2 is Maine CPU which controls each part of equipment, and RAM used as ROM and the work area where the program for controlling CPU was written in is prepared in that interior. A key block for a user to give instruction code to Maine CPU 2, as for 3 and 4 are remote control receive sections, receive the command code transmitted from the infrared type remote commander which is not illustrated, and output it to Maine CPU 2.
[0004] The frame memory on which 5 records an image, and 6 are the memory control CPU for controlling a frame memory 5, and control a frame memory 5 by the bottom of control of Maine CPU 2. RAM used as ROM and the work area where the program for controlling a frame memory 5 was written in this memory control CPU 6 is prepared. 7 is the mechanism section which performs a video print, and prints out the image recorded on the frame memory 5. 8 is the mechanism control CPU for controlling the mechanism section 7, and controls the mechanism section 7 by the bottom of control of Maine CPU 2. RAM used as ROM and the work area where the program for controlling the mechanism section 7 was written in this mechanism control CPU 8 is prepared.
[0005] Thus, in the constituted video printer 1, if a user gives instruction code to Maine CPU 2 using a key block 3 or an infrared type remote commander, Maine CPU 2 interprets the instruction code, and if the contents are record of an image, it will output the instruction for recording an image on a frame memory 5 to the memory control CPU 6. On the other hand, if the contents of the above-mentioned instruction code are printing, the instruction for printing an image to the mechanism control CPU 8 will be outputted.
[0006]
[Problem(s) to be Solved by the Invention] By the way, if it was in the conventional video printer mentioned above, there was a trouble that it could not separate from the spot until it obtained the required image from being forced what is seen from the beginning of a TV program to the last, in order to obtain a required image (for example, a cook scene where an ingredient is displayed in a group), in a TV program.
[0007] Then, this invention aims at offering the video printer which can obtain only a required image suitably, and its automatic printing approach, without seeing from the beginning of a TV program to the last.
[0008]
[Means for Solving the Problem] The video printer by invention according to claim 1 for the above-mentioned purpose achievement In the video printer equipped with the frame memory which records an image, a printing means to print an image, and the control means which controls printing of an image to said printing means while controlling record to said frame memory of the inputted image It has an in deck code extract means to extract the index code on which the inputted TV signal was overlapped. Said control means When an index code is extracted by said in deck code extract means, it is characterized by performing control which performs control which records the image with which it was superimposed on this in deck code on said frame memory and which is printed with said both printing means.
[0009] Moreover, the automatic printing approach of the video printer by invention according to claim 2 The 1st process in which it judges whether the index code on which the inputted TV signal was overlapped was detected, The 2nd process in which it judges whether the image with which it was superimposed on this index code when it was judged that said index code was detected in said 1st process was recorded on the frame memory, The 3rd process in which it judges whether printing activation is possible when the image with which it was superimposed on said index code in said 2nd process is judged to have been recorded on the frame memory, The 4th process which outputs the command for printing the image recorded on said frame memory when it was judged in said 3rd process that printing activation is possible, The 5th process which outputs the command for making the image with which it was superimposed on said index code when the image with which it was superimposed on said index code in said 2nd process was judged not to be recorded on a frame memory record on said frame memory, It is characterized by printing the image with which it was alike with the image and was superimposed more on the index code.
[0010]
[Function] In this invention, an extract of the in deck code on which the TV signal was overlapped prints the image with which it was superimposed on the in deck code. Therefore, only a required image can be obtained suitably, without seeing from the beginning of a TV program to the last.

[0011]
[Example] Hereafter, this invention is explained based on a drawing. Drawing 1 is the perspective view showing the busy condition of one example of the video printer of this invention. In this drawing, a video printer 10 inputs the video signal outputted from television 11, and the TV signal (RF signal) which was outputted from the antenna 12 and distributed with the distributor 13, respectively. Here, corresponding to the image which a user needs for the TV signal transmitted from a broadcasting station beforehand, it is superimposed on the index code. A video printer 10 will print the image corresponding to the index code, if the in deck code on which the inputted TV signal was overlapped is extracted.

[0012] Drawing 2 is the block diagram showing the outline configuration of a video printer 10. In addition, the part which is common in drawing 4 mentioned above is given with the same sign, and the explanation is omitted. In this drawing, 15 is an index code wave detector and detects the index code on a TV signal. The detected index code is inputted into Maine CPU 16. Maine CPU 16 gives the instruction printed while recording the image with which it was superimposed on the index code to the memory control CPU 6 and the mechanism control CPU 8 besides performing the same processing as conventional Maine CPU 2 when an index code was detected from the index code wave detector 15. In addition, above-mentioned Maine CPU 16 corresponds to a control means.

[0013] Automatic printing processing is explained in such a configuration, referring to the flow chart shown in drawing 3 . In drawing 3 , if it judges that it judged first whether the index code was detected at step S10, and detected, no which recorded the video signal to the frame memory 5 for performing automatic printing at step S12 will be judged. If it judges that the video signal to a frame memory 5 is not recorded in this judgment, after giving a record instruction to the memory control CPU 6 at step S14, no which recorded the video signal to a frame memory 5 will be again judged through step S10.

[0014] If it judges that the video signal to a frame memory 5 was recorded, it will judge whether it can print at step S16. That is, it judges whether there is any print sheet or there is any ink ribbon. Decision of that it can print gives a printing instruction to the mechanism control CPU 8 at step S18. The image with which it was superimposed on the index code is recorded on a frame memory 5 by this, and the image concerned is further printed in the mechanism section 7. Thus, the image with which it was superimposed on the index code is printed automatically.

[0015] Although the TV signal transmitted from a broadcasting station was incorporated in the application . above-mentioned example, an image needed cannot be automatically printed with the image recorded by the video cassette recorder. Then, when an index code wave detector is formed also in a video cassette recorder side and an index code is detected, the index code is recorded on a video sub-code (VSC). And when a video cassette recorder plays the tape on which the index code was recorded on the video sub-code, the command (printing command) which LANC which controls this video cassette recorder, video printer, etc. generated based on the information on a video sub-code is supplied to a video printer 10. Thereby, a video printer 10 prints the image specified by a command. In addition, although there are an object for colors and an object for monochrome in a video printer, it cannot be overemphasized that the above-mentioned example can apply these either.

[0016]
[Effect of the Invention] since the image with which it was superimposed on the index code was printed when the index code on which the TV signal was overlapped was extracted according to this invention — the last ****** from the beginning of a TV program — there are nothings and only a required image can be obtained suitably.

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[Translation done.]

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TECHNICAL FIELD

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[Industrial Application] This invention relates to the video printer which prints the image copied out on television, and its automatic printing approach.

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[Translation done.]

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PRIOR ART

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[Description of the Prior Art] When printing an image with a video printer, he is trying to choose an image to print while a user surely looks at the image of a video cassette recorder (VCR) or television conventionally. In addition, a video cassette recorder is the same as that of a video tape recorder (VTR).
[0003] Drawing 4 is the block diagram showing the outline configuration of the conventional video printer 1. In this drawing, 2 is Maine CPU which controls each part of equipment, and RAM used as ROM and the work area where the program for controlling CPU was written in is prepared in that interior. A key block for a user to give instruction code to Maine CPU 2, as for 3 and 4 are remote control receive sections, receive the command code transmitted from the infrared type remote commander which is not illustrated, and output it to Maine CPU 2.
[0004] The frame memory on which 5 records an image, and 6 are the memory control CPU for controlling a frame memory 5, and control a frame memory 5 by the bottom of control of Maine CPU 2. RAM used as ROM and the work area where the program for controlling a frame memory 5 was written in this memory control CPU 6 is prepared. 7 is the mechanism section which performs a video print, and prints out the image recorded on the frame memory 5. 8 is the mechanism control CPU for controlling the mechanism section 7, and controls the mechanism section 7 by the bottom of control of Maine CPU 2. RAM used as ROM and the work area where the program for controlling the mechanism section 7 was written in this mechanism control CPU 8 is prepared.
[0005] Thus, in the constituted video printer 1, if a user gives instruction code to Maine CPU 2 using a key block 3 or an infrared type remote commander, Maine CPU 2 interprets the instruction code, and if the contents are record of an image, it will output the instruction for recording an image on a frame memory 5 to the memory control CPU 6. On the other hand, if the contents of the above-mentioned instruction code are printing, the instruction for printing an image to the mechanism control CPU 8 will be outputted.

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EFFECT OF THE INVENTION

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[Effect of the Invention] since the image with which it was superimposed on the index code was printed when the index code on which
the TV signal was overlapped was extracted according to this invention — the last ****** from the beginning of a TV program —
there are nothings and only a required image can be obtained suitably.

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[Translation done.]

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] By the way, if it was in the conventional video printer mentioned above, there was a trouble that it could not separate from the spot until it obtained the required image from being forced what is seen from the beginning of a TV program to the last, in order to obtain a required image (for example, a cook scene where an ingredient is displayed in a group), in a TV program.
[0007] Then, this invention aims at offering the video printer which can obtain only a required image suitably, and its automatic printing approach, without seeing from the beginning of a TV program to the last.

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[Translation done.]

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## MEANS

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[Means for Solving the Problem] The video printer by invention according to claim 1 for the above-mentioned purpose achievement In the video printer equipped with the frame memory which records an image, a printing means to print an image, and the control means which controls printing of an image to said printing means while controlling record to said frame memory of the inputted image It has an in deck code extract means to extract the index code on which the inputted TV signal was overlapped. Said control means When an index code is extracted by said in deck code extract means, it is characterized by performing control which performs control which records the image with which it was superimposed on this in deck code on said frame memory and which is printed with said both printing means.

[0009] Moreover, the automatic printing approach of the video printer by invention according to claim 2 The 1st process in which it judges whether the index code on which the inputted TV signal was overlapped was detected, The 2nd process in which it judges whether the image with which it was superimposed on this index code when it was judged that said index code was detected in said 1st process was recorded on the frame memory, The 3rd process in which it judges whether printing activation is possible when the image with which it was superimposed on said index code in said 2nd process is judged to have been recorded on the frame memory, The 4th process which outputs the command for printing the image recorded on said frame memory when it was judged in said 3rd process that printing activation is possible, The 5th process which outputs the command for making the image with which it was superimposed on said index code when the image with which it was superimposed on said index code in said 2nd process was judged not to be recorded on a frame memory record on said frame memory, It is characterized by printing the image with which it was alike with the image and was superimposed more on the index code.

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OPERATION

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[Function] In this invention, an extract of the in deck code on which the TV signal was overlapped prints the image with which it was superimposed on the in deck code. Therefore, only a required image can be obtained suitably, without seeing from the beginning of a TV program to the last.

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[Translation done.]

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EXAMPLE

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[Example] Hereafter, this invention is explained based on a drawing. Drawing 1 is the perspective view showing the busy condition of one example of the video printer of this invention. In this drawing, a video printer 10 inputs the video signal outputted from television 11, and the TV signal (RF signal) which was outputted from the antenna 12 and distributed with the distributor 13, respectively. Here, corresponding to the image which a user needs for the TV signal transmitted from a broadcasting station beforehand, it is superimposed on the index code. A video printer 10 will print the image corresponding to the index code, if the in deck code on which the inputted TV signal was overlapped is extracted.
[0012] Drawing 2 is the block diagram showing the outline configuration of a video printer 10. In addition, the part which is common in drawing 4 mentioned above is given with the same sign, and the explanation is omitted. In this drawing, 15 is an index code wave detector and detects the index code on a TV signal. The detected index code is inputted into Maine CPU 16. Maine CPU 16 gives the instruction printed while recording the image with which it was superimposed on the index code to the memory control CPU 6 and the mechanism control CPU 8 besides performing the same processing as conventional Maine CPU 2 when an index code was detected from the index code wave detector 15. In addition, above-mentioned Maine CPU 16 corresponds to a control means.
[0013] Automatic printing processing is explained in such a configuration, referring to the flow chart shown in drawing 3 . In drawing 3 , if it judges that it judged first whether the index code was detected at step S10, and detected, no which recorded the video signal to the frame memory 5 for performing automatic printing at step S12 will be judged. If it judges that the video signal to a frame memory 5 is not recorded in this judgment, after giving a record instruction to the memory control CPU 6 at step S14, no which recorded the video signal to a frame memory 5 will be again judged through step S10.
[0014] If it judges that the video signal to a frame memory 5 was recorded, it will judge whether it can print at step S16. That is, it judges whether there is any print sheet or there is any ink ribbon. Decision of that it can print gives a printing instruction to the mechanism control CPU 8 at step S18. The image with which it was superimposed on the index code is recorded on a frame memory 5 by this, and the image concerned is further printed in the mechanism section 7. Thus, the image with which it was superimposed on the index code is printed automatically.
[0015] Although the TV signal transmitted from a broadcasting station was incorporated in the application . above-mentioned example, an image needed cannot be automatically printed with the image recorded by the video cassette recorder. Then, when an index code wave detector is formed also in a video cassette recorder side and an index code is detected, the index code is recorded on a video sub-code (VSC). And when a video cassette recorder plays the tape on which the index code was recorded on the video sub-code, the command (printing command) which LANC which controls this video cassette recorder, video printer, etc. generated based on the information on a video sub-code is supplied to a video printer 10. Thereby, a video printer 10 prints the image specified by a command. In addition, although there are an object for colors and an object for monochrome in a video printer, it cannot be overemphasized that the above-mentioned example can apply these either.

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[Translation done.]

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## DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]
[Drawing 1] It is the perspective view showing the busy condition of one example of the video printer concerning this invention.
[Drawing 2] It is the block diagram of the video printer of this example.
[Drawing 3] It is the flow chart of automatic printing processing of the video printer of this example.
[Drawing 4] It is the block diagram of the conventional video printer.
[Description of Notations]
5 Frame Memory
6 Memory Control CPU
7 Mechanism Section (Printing Means)
8 Mechanism Control CPU
15 Index Wave Detector (Index Code Extract Means)
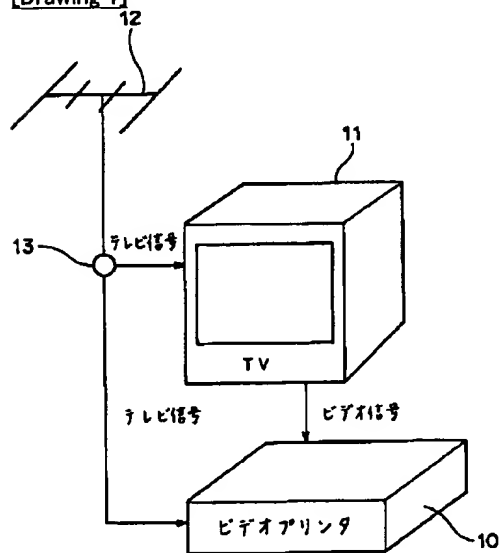16 Maine CPU (Control Means)

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[Translation done.]

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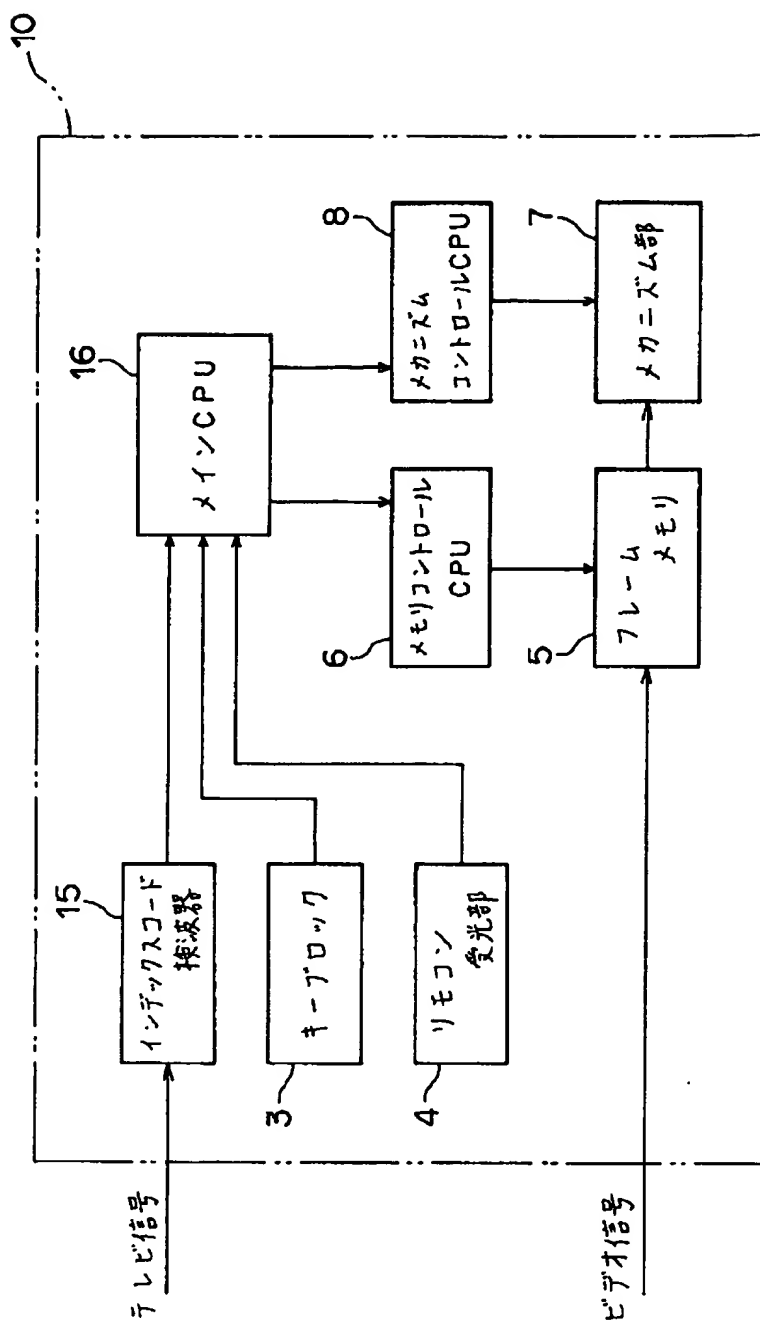damages caused by the use of this translation.

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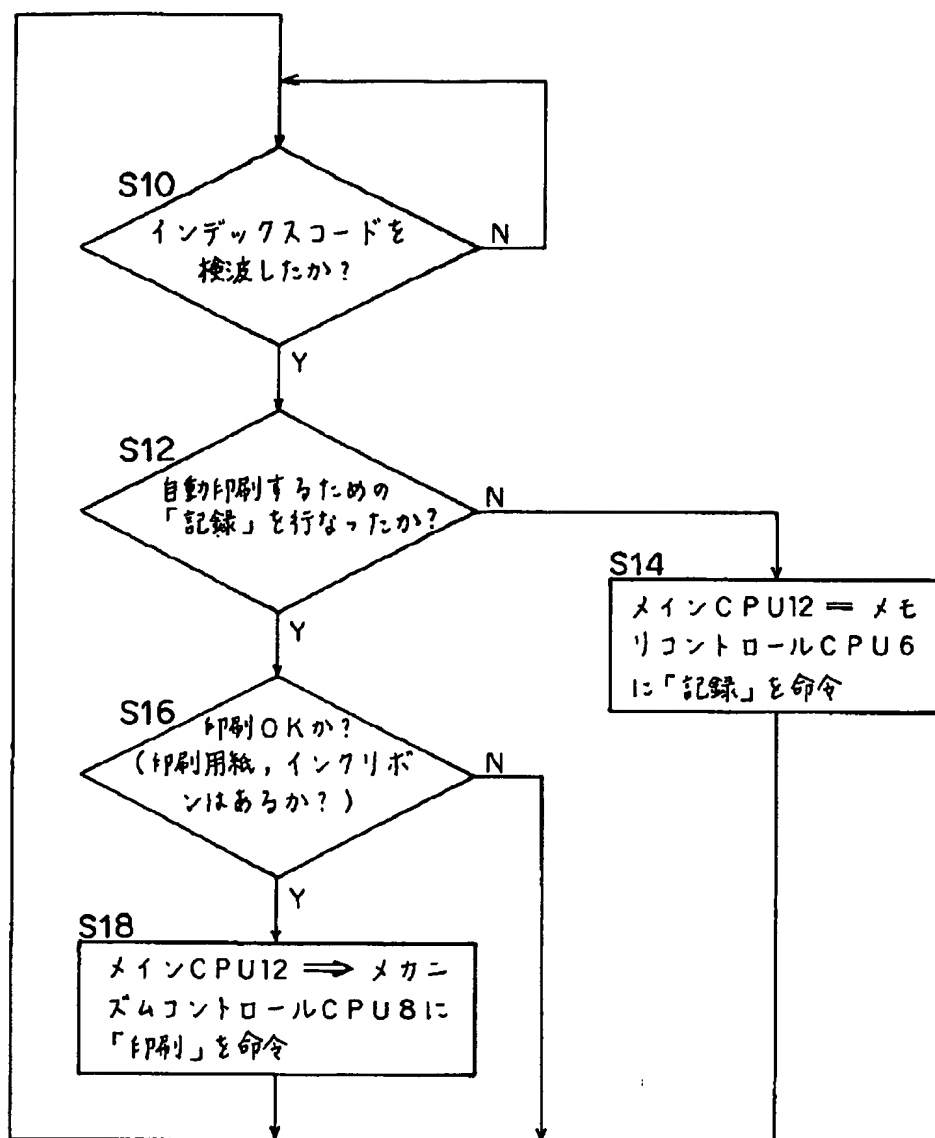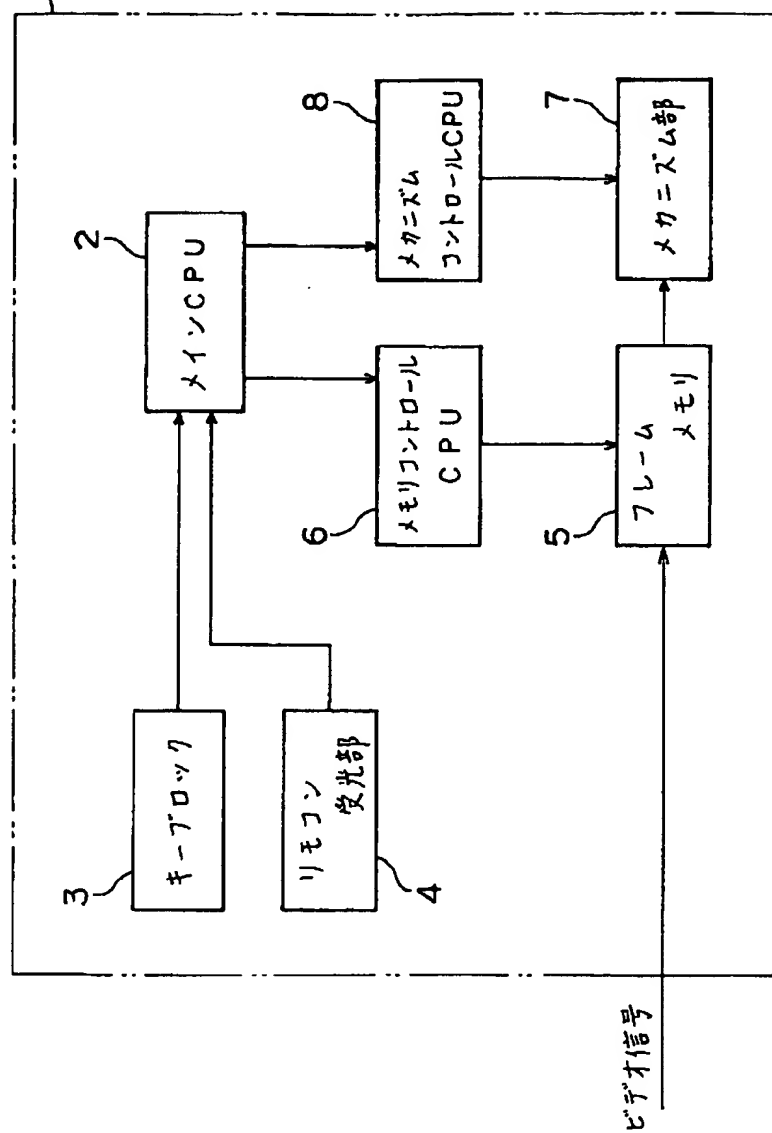3.In the drawings, any words are not translated.

DRAWINGS

[Drawing 1]



[Drawing 2]

[Drawing 3]



- 10
- 16 メインCPU
- 8 メカニズム コントロールCPU
- 7 メカニズム部
- 6 メモリコントロール CPU
- 5 フレーム メモリ
- 15 インデックスコード 検波器
- 3 キーブロック
- 4 リモコン 受光部
- テレビ信号
- ビデオ信号

S10 ◇ インデックスコードを
検波したか？　→ N

↓ Y

S12 ◇ 自動印刷するための
「記録」を行なったか？　→ N

↓ Y

S14 □ メインCPU12 ＝ メモ
リコントロールCPU6
に「記録」を命令

S16 ◇ 印刷OKか？
（印刷用紙，インクリボ
ンはあるか？）　→ N

↓ Y

S18 □ メインCPU12 ⇒ メカニ
ズムコントロールCPU8に
「印刷」を命令

[Drawing 4]

[Translation done.]

| (51)Int.Cl.⁶ | | 識別記号 | 庁内整理番号 | F I | | 技術表示箇所 |
|---|---|---|---|---|---|---|
| H04N | 5/76 | E | | | | |
| B41J | 5/30 | Z | | | | |
| H04N | 1/21 | | | | | |
| | 5/91 | | | | | |

H04N　5/91　　　　H

審査請求　未請求　請求項の数2　FD　（全 7 頁）
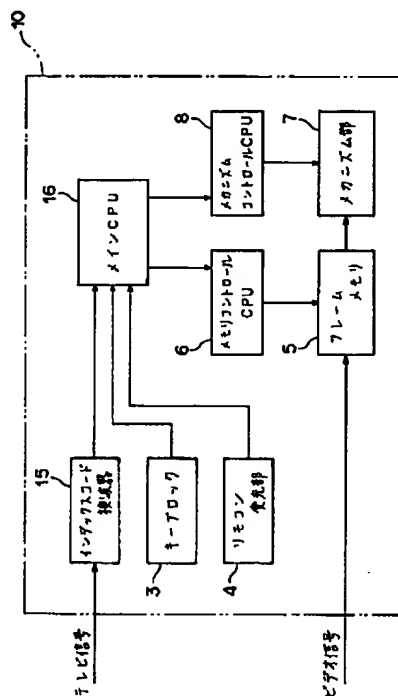
(54)【発明の名称】　ビデオプリンタ及びその自動印刷方法

(57)【要約】

【目的】　ビデオプリンタにおいて、テレビ番組の最初から最後まで見ることなく、必要な画像のみを適宜得ることができるようにする。

【構成】　インデックスコード検波器15にてテレビ信号に重畳されたインデックスコードを検波する。そして、インデックスコードが検波されたときに、メインCPU16が、該インデックコードが重畳された画像をフレームメモリ5に記録する制御を行う共にメカニズム部7にて印刷する制御を行う。これにより、テレビ番組の最初から最後まで見ることなく、必要な画像のみを適宜得ることが可能になる。

1

【特許請求の範囲】

【請求項1】　画像を記録するフレームメモリと、
画像を印刷する印刷手段と、
入力した画像の前記フレームメモリへの記録を制御すると共に前記印刷手段に対して画像の印刷を制御する制御手段と、
を備えたビデオプリンタにおいて、
入力したテレビ信号に重畳されたインデックスコードを抽出するインデックスコード抽出手段を有し、
前記制御手段は、前記インデックスコード抽出手段によりインデックスコードが抽出されたときに、該インデックスコードが重畳された画像を前記フレームメモリに記録する制御を行う共に前記印刷手段にて印刷する制御を行うことを特徴とするビデオプリンタ。

【請求項2】　入力したテレビ信号に重畳されたインデックスコードを検波したか否かの判定を行う第1の過程、
前記第1の過程において前記インデックスコードが検波されたと判断された場合に該インデックスコードが重畳された画像がフレームメモリに記録されたか否かの判定を行う第2の過程、
前記第2の過程において前記インデックスコードが重畳された画像がフレームメモリに記録されたと判断された場合に印刷実行可能か否かの判定を行う第3の過程、
前記第3の過程において印刷実行可能と判断された場合に前記フレームメモリに記録された画像を印刷するための指令を出力する第4の過程、
前記第2の過程において前記インデックスコードが重畳された画像がフレームメモリに記録されていないと判断された場合に前記インデックスコードが重畳された画像を前記フレームメモリに記録させるための指令を出力する第5の過程、によりインデックスコードが重畳された画像の印刷を行うことを特徴とするビデオプリンタの自動印刷方法。

【発明の詳細な説明】

【0001】

【産業上の利用分野】本発明は、例えばテレビに写し出された映像を印刷するビデオプリンタ及びその自動印刷方法に関する。

【0002】

【従来の技術】従来より、ビデオプリンタで映像を印刷するときには、必ずユーザがビデオカセットレコーダ（VCR）、もしくはテレビの映像を見ながら印刷したい画像を選択するようにしている。なお、ビデオカセットレコーダはビデオテープレコーダ（VTR）と同様のものである。

【0003】図4は従来のビデオプリンタ1の概略構成を示すブロック図である。この図において、2は装置各部を制御するメインCPUであり、その内部にはCPUを制御するためのプログラムが書き込まれたROMおよ

2

びワークエリアとして使用するRAMが設けられている。3はユーザがメインCPU2に命令コードを与えるためのキーブロック、4はリモコン受信部であり、図示せぬ赤外線式リモートコマンダより送信される指令コードを受信し、メインCPU2に出力する。

【0004】5は画像を記録するフレームメモリ、6はフレームメモリ5を制御するためのメモリコントロールCPUであり、メインCPU2の制御下でフレームメモリ5の制御を行う。このメモリコントロールCPU6にはフレームメモリ5の制御を行うためのプログラムが書き込まれたROMおよびワークエリアとして使用するRAMが設けられている。7はビデオプリントを行うメカニズム部であり、フレームメモリ5に記録された画像をプリントアウトする。8はメカニズム部7を制御するためのメカニズムコントロールCPUであり、メインCPU2の制御下でメカニズム部7の制御を行う。このメカニズムコントロールCPU8にはメカニズム部7の制御を行うためのプログラムが書き込まれたROMおよびワークエリアとして使用するRAMが設けられている。

【0005】このように構成されたビデオプリンタ1において、ユーザーがキーブロック3または赤外線式リモートコマンダを使用して命令コードをメインCPU2に与えると、メインCPU2はその命令コードを解釈し、その内容が画像の記録であれば、メモリコントロールCPU6に対して画像をフレームメモリ5に記録するための命令を出力する。他方、上記命令コードの内容が印刷であれば、メカニズムコントロールCPU8に対して画像を印刷するための命令を出力する。

【0006】

【発明が解決しようとする課題】ところで、上述した従来のビデオプリンタにあっては、テレビ番組のなかで必要な画像（例えば料理番組では材料が表示される場面）を得るためにテレビ番組の最初から最後まで見ることを強要されることから、必要な画像を得るまではその場から離れることができないという問題点があった。

【0007】そこで本発明は、テレビ番組の最初から最後まで見ることなく、必要な画像のみを適宜得ることができるビデオプリンタ及びその自動印刷方法を提供することを目的としている。

【0008】

【課題を解決するための手段】上記目的達成のため請求項1記載の発明によるビデオプリンタは、画像を記録するフレームメモリと、画像を印刷する印刷手段と、入力した画像の前記フレームメモリへの記録を制御すると共に前記印刷手段に対して画像の印刷を制御する制御手段とを備えたビデオプリンタにおいて、入力したテレビ信号に重畳されたインデックスコードを抽出するインデックスコード抽出手段を有し、前記制御手段は、前記インデックスコード抽出手段によりインデックスコードが抽出されたときに、該インデックスコードが重畳された画像を前

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記フレームメモリに記録する制御を行う共に前記印刷手段にて印刷する制御を行うことを特徴とする。

【０００９】また、請求項２記載の発明によるビデオプリンタの自動印刷方法は、入力したテレビ信号に重畳されたインデックスコードを検波したか否かの判定を行う第１の過程、前記第１の過程において前記インデックスコードが検波されたと判断された場合に該インデックスコードが重畳された画像がフレームメモリに記録されたか否かの判定を行う第２の過程、前記第２の過程において前記インデックスコードが重畳された画像がフレームメモリに記録されたと判断された場合に印刷実行可能か否かの判定を行う第３の過程、前記第３の過程において印刷実行可能と判断された場合に前記フレームメモリに記録された画像を印刷するための指令を出力する第４の過程、前記第２の過程において前記インデックスコードが重畳された画像がフレームメモリに記録されていないと判断された場合に前記インデックスコードが重畳された画像を前記フレームメモリに記録させるための指令を出力する第５の過程、によりインデックスコードが重畳された画像の印刷を行うことを特徴とする。

【００１０】
【作用】本発明では、テレビ信号に重畳されたインデックコードを抽出すると、そのインデックコードが重畳された画像の印刷を行う。したがって、テレビ番組の最初から最後まで見ることなく、必要な画像のみを適宜得ることができる。

【００１１】
【実施例】以下、本発明を図面に基づいて説明する。図１は本発明のビデオプリンタの一実施例の使用状態を示す斜視図である。この図において、ビデオプリンタ１０は、テレビ１１より出力されるビデオ信号と、アンテナ１２より出力され、分配器１３にて分配されたテレビ信号（ＲＦ信号）を、それぞれ入力する。ここで、放送局より送信されるテレビ信号には、予めユーザが必要とする画像に対応してインデックスコードが重畳されている。ビデオプリンタ１０は、入力したテレビ信号に重畳されたインデックコードを抽出すると、そのインデックスコードに対応する画像を印刷する。

【００１２】図２はビデオプリンタ１０の概略構成を示すブロック図である。なお、前述した図４と共通する部分には同一の符号と付してその説明を省略する。この図において、１５はインデックスコード検波器であり、テレビ信号上のインデックスコードを検波する。検波されたインデックスコードはメインＣＰＵ１６に入力される。メインＣＰＵ１６は、従来のメインＣＰＵ２と同様の処理を行う以外に、インデックスコード検波器１５よりインデックスコードが検波されたときに、メモリコントロールＣＰＵ６およびメカニズムコントロールＣＰＵ８に対して、インデックスコードが重畳された画像を記録すると共に印刷する命令を与える。なお、上記メイン

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ＣＰＵ１６は制御手段に対応する。

【００１３】このような構成において、図３に示すフローチャートを参照しながら自動印刷処理について説明する。図３において、まず、ステップＳ１０でインデックスコードを検波したか否かの判定を行い、検波したと判断すると、ステップＳ１２で自動印刷を行うためのフレームメモリ５へのビデオ信号の記録を行った否かの判定を行う。この判定においてフレームメモリ５へのビデオ信号の記録を行っていないと判断すると、ステップＳ１４でメモリコントロールＣＰＵ６に対して記録命令を与えた後、再度、ステップＳ１０を介して、フレームメモリ５へのビデオ信号の記録を行った否かの判定を行う。

【００１４】フレームメモリ５へのビデオ信号の記録を行ったと判断すると、ステップＳ１６で印刷が可能であるか否かの判断を行う。すなわち、印刷用紙があるか、インクリボンがあるか等の判断を行う。印刷が可能であると判断すると、ステップＳ１８でメカニズムコントロールＣＰＵ８に対して印刷命令を与える。これにより、インデックスコードが重畳された画像がフレームメモリ５に記録され、さらに当該画像がメカニズム部７にて印刷される。このように、インデックスコードが重畳された画像が自動的に印刷される。

【００１５】応用例. 上記実施例では、放送局より送信されてくるテレビ信号を取り込むものであったが、ビデオカセットレコーダで記録された映像では、欲しい画像を自動的に印刷することはできない。そこで、ビデオカセットレコーダ側にもインデックスコード検波器を設け、インデックスコードを検波したときに、そのインデックスコードをビデオサブコード（ＶＳＣ）上に記録する。そして、ビデオサブコード上にインデックスコードが記録されたテープを、ビデオカセットレコーダが再生したときに、このビデオカセットレコーダとビデオプリンタ等を制御するＬＡＮＣがビデオサブコード上の情報に基づいて生成したコマンド（印刷指令）をビデオプリンタ１０に供給する。これにより、ビデオプリンタ１０はコマンドが指定する画像を印刷する。なお、ビデオプリンタには、カラー用とモノクロ用とがあるが、上記実施例はこれらのいずれでも適用できることは言うまでもない。

【００１６】
【発明の効果】本発明によれば、テレビ信号に重畳されたインデックスコードを抽出したときに、そのインデックスコードが重畳された画像を印刷するようにしたので、テレビ番組の最初から最後まで見ることなく、必要な画像のみを適宜得ることができる。

【図面の簡単な説明】
【図１】本発明に係るビデオプリンタの一実施例の使用状態を示す斜視図である。
【図２】同実施例のビデオプリンタのブロック図である。

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【図3】同実施例のビデオプリンタの自動印刷処理のフローチャートである。

【図4】従来のビデオプリンタのブロック図である。

【符号の説明】

5　フレームメモリ

6　メモリコントロールCPU

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＊7　メカニズム部（印刷手段）
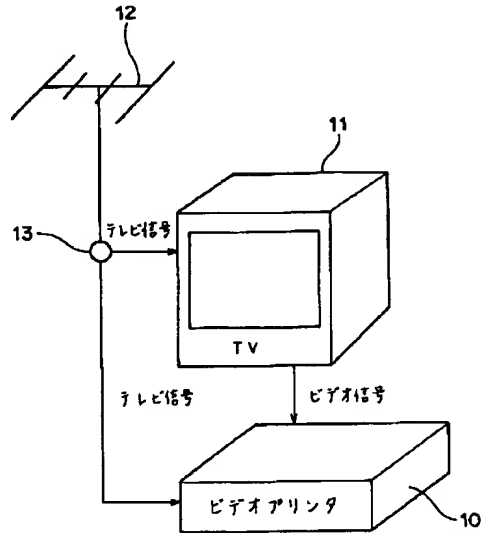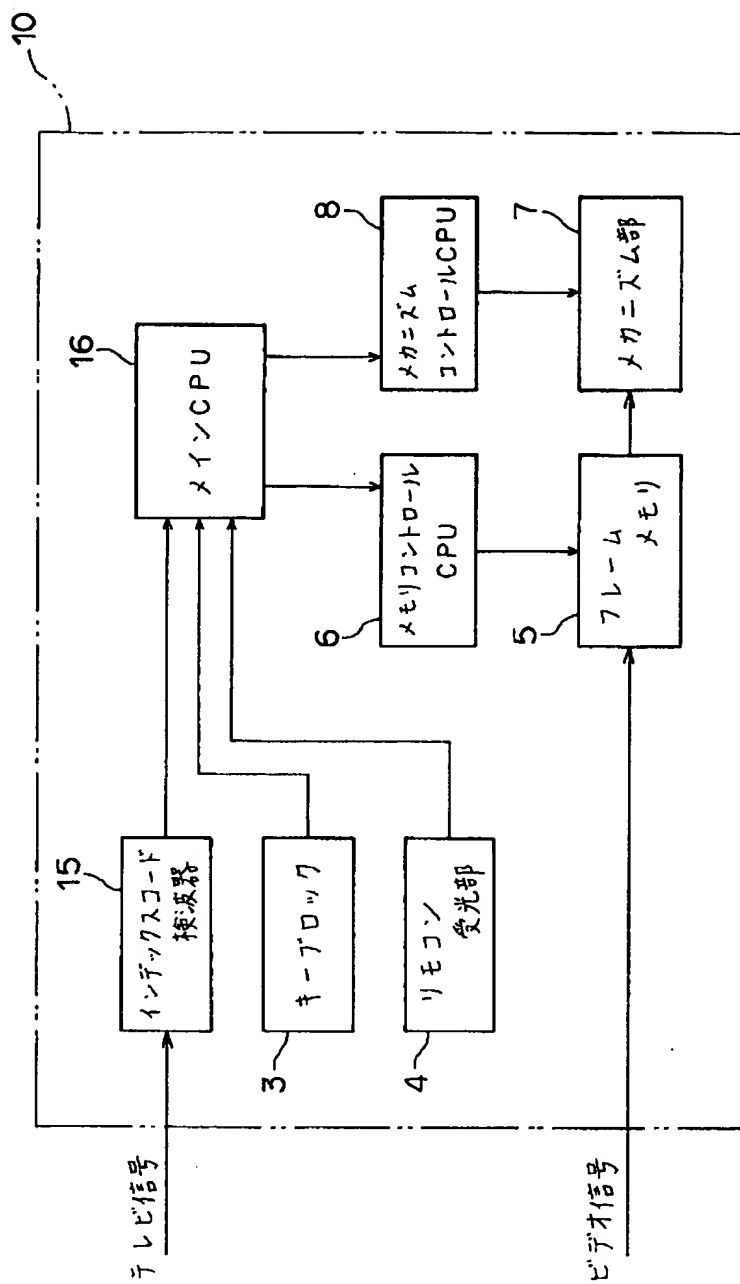
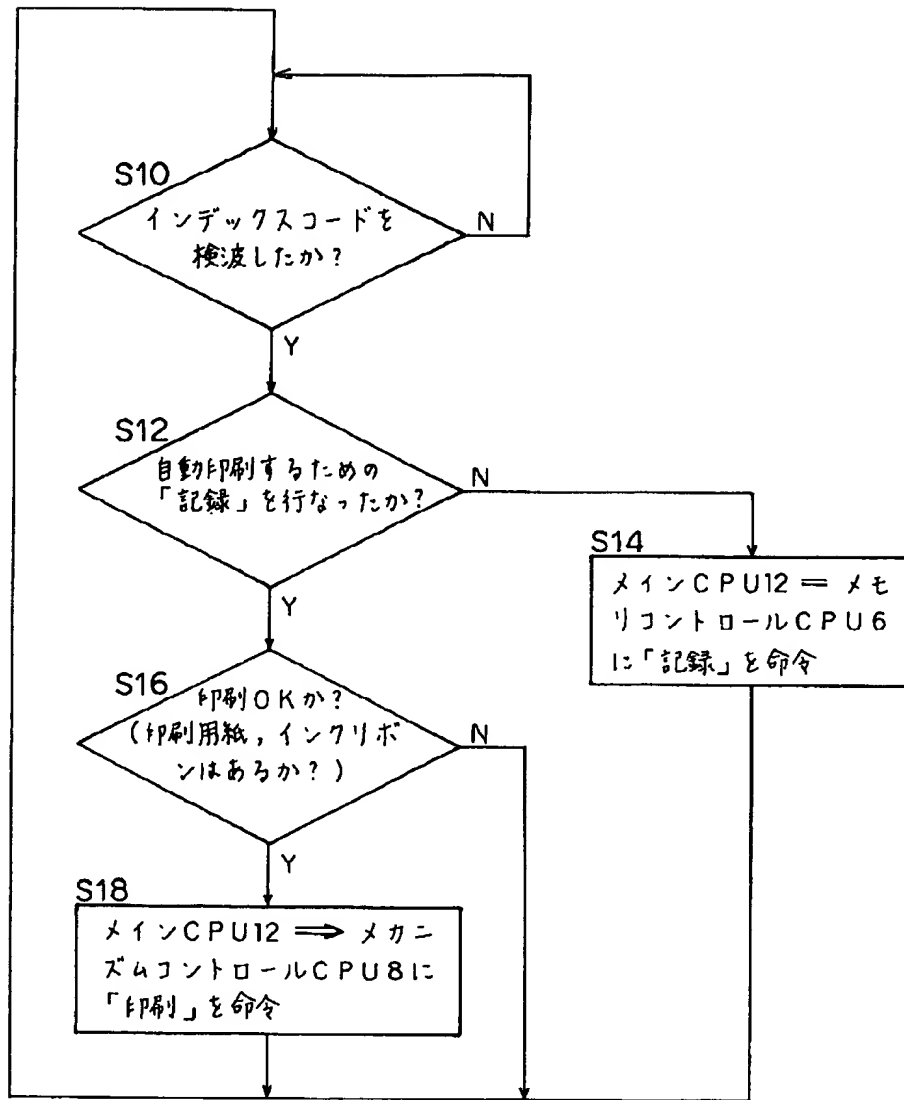8　メカニズムコントロールCPU

15　インデックス検波器（インデックスコード抽出手段）

16　メインCPU（制御手段）

＊

【図1】

【図2】

【図3】



S10　インデックスコードを検波したか？　—N

Y

S12　自動印刷するための「記録」を行なったか？　—N

S14　メインCPU12 ＝ メモリコントロールCPU6に「記録」を命令

Y

S16　印刷OKか？（印刷用紙，インクリボンはあるか？）　—N

Y

S18　メインCPU12 ⇒ メカニズムコントロールCPU8に「印刷」を命令

【図4】